United States Environmental Protection Agency
POSITION DESCRIPTION COVERSHEET

1. DUTY LOCATION Chicago, Illinois 21

2. POSITION NUMBER N3710XA

3. CLASSIFICATION ACTION: a. Reference of Series and Date of Standards Used to Classify his Position

	b. Title	c. Service	d. Series	e. Grade	f. CLC
Official Allocation	Environmental Scientist	GS	819/1301	13	12/177
4. SUPERVISOR'S RECOMMENDATION	Interdisciplinary Engineer/Scientist	GS	0819/1301	13	

5. ORGANIZATIONAL TITLE OF POSITION (if any)	6. NAME OF EMPLOY ~~SUSANNE KINS~~ 90553201 ~~Sheila Batka~~ MargareT SiefferT
7. ORGANIZATION (give complete organizational breakdown)	
a. U. S. ENVIRONMENTAL PROTECTION AGENCY	e. 90553201 Integrated Air Toxics S ERIN NEWMAN
b. Region 5	f. 90553201 ~~JANETTE MARRERO~~
c. Air and Radiation Division	g. 90553201 ~~Elizabeth~~ Jacqueline Nwia
d. Air Toxics and Assessment Branch	h. EPAYS Organization Code 90552800

8. SUPERVISORY/MANAGERIAL DESIGNATION

_ [S] First or Second level supervisor: An individual who performs supervisory work and managerial responsibilities that require accomplishment of work through combined technical and administrative direction of others; and which constitute a major duty occupying at least 25% of their time. Such supervisory managerial authorities and include assigning and reviewing work on a daily, weekly or monthly basis; assuring that production and accuracy requirements are met; approving leave; recommending performance standards and ratings, and exercising 4 of the 5 authorities and responsibilities described at Level 3-2c in the General Schedule Supervisory Guide.

_ [A] An individual (as defined by Title VII of the Civil Service Reform Act) who is authorized to hire, direct, assign, promote, reward, transfer, lay off, suspend, discipline, or remove one or more employees, or effectively recommend such action. The exercise of this responsibility is not routine or clerical in nature, but requires the consistent exercise of independent judgment.

_ [M] A manager who directs the work of an organization; is accountable for the success of line or staff programs; monitors, evaluates, and adjusts program activities; and performs the full range of duties outlined in the General Schedule Supervisory Guide. May also include deputies who fully share responsibility for managing the organization or who serve as an alter ego to the manager.

_ [B] A management official (as defined by Title VII of the Civil Service Reform Act) who formulates, determines or influences an organization's policies. This means creating, establishing, or prescribing general principles, plans, or courses of action for an organization; or bringing about a course of action for the organization. Management officials must actively participate in shaping the organization's policies not just interpret laws and regulations give resource information or recommendations or serve as experts or highly trained professionals who implement or interpret the organization's policies and plans.

X [N] None of the above applies. This is a non-supervisory/non-managerial position.

9. SUPERVISORY CERTIFICATION **I certify that this is an accurate statement of the major duties and responsibilities of this position and its organizational relationships and that the position is necessary to carry out governmental functions for which I am responsible. The certification is made with the knowledge that this information is to be used for statutory purposes relating to appointment and payment of public funds, and that false or misleading statements may constitute** violations of such statutes or their implementing regulations.

a. Typed Name and Title of Immediate Supervisor	b. Signature	c. Date	d. Typed Name and Title of Second-Level Supervisor	e. Signature	f. Date
Chief Integrated Air Toxics Section			Bharat Mathur, Director Air and Radiation Division		2/11/02

10. OFFICIAL CLASSIFICATION CERTIFICATION

a.	b.	c.
☒ This position has no promotion potential. ☐ If position develops as planned and employee progresses satisfactorily, this position has known promotion potential to grade:	☐ Fair Labor Standards Act ☐ Nonexempt ☒ Exempt	c. Functional Code 94

d. Bargaining Unit Code	e. Check, if applicable:	f. Signature	g. Date
0012	☐ Medical Monitoring Required ☐ Extramural Resources Management Duties (_% of time)		9/7/03

11. REMARKS

I- Interdisciplinary: Envir. Engineer/Environ. Scientist

PD Updated 4/8/13 SC

POSITION DESCRIPTION
ENVIRONMENTAL SCIENTIST
GS- /1301-13

I. Introduction

Serves as an interdisciplinary environmental engineer/scientist on the staff of Region V's Air and Radiation Division with responsibility (1) for independently evaluating the adequacy of criteria and/or toxics air pollution control plans and programs, and individual major source permits developed and submitted by State and local air pollution control agencies pursuant to the requirements of the Clean Air Act; (2) for developing technical support documents and Federal Register Notices to initiate formal rulemaking on submitted plans or appropriate action on permits; (3) for providing scientific or engineering support to the successful defense of litigation challenging the Agency's rulemaking or permit decisions; (4) for preparing Federal implementation plans or permits in the absence of acceptable State action; (5) for evaluating State and local air regulatory development and permit programs and making constructive recommendations for their improvement; (6) for coordination and resolving air toxics issues associated with the Great Lakes, Superfund, RCRA, and Title III of the Clean Air Act. Assignments (1) pertain to the reduction of the quantity and quality of pollutants emitted in broad geographic areas by mobile, stationary, and area sources to levels protective of public health and welfare; (2) entail detailed scientific or economic engineering evaluations to support rulemaking actions, risk making decisions, and permit reviews and the preparation and presentation of formal testimony based on those evaluations; (3) concern both criteria pollutants (e.g., volatile organic compounds, sulfur dioxide, fine particulates), and air toxicants (e.g., lead, benzene, asbestos); (4) include a wide range of major source type categories including, but not limited to, power plants, iron and steel mills, chemical plants, oil refineries, pulp and paper mills, auto assembly plants; i.e., the entire spectrum of industrial activity found in the Midwest; (5) require close working relations with and detailed knowledge of assigned State and local air agencies; and (6) entail the use of grant and audit tools and technology transfer to improve those programs; and (7) involve working directly with other Regional media programs, other Regions, Headquarters Offices, the Great Lakes National Program office and International Programs offices.

II. Major Duties and Responsibilities

- evaluates the adequacy of State and local regulations, air toxics and permit programs, and individual major permits covering a wide variety of sources of air emissions based on a wide range of available information from diverse sources and with varying degrees of quality and reliability including the use of air quality models and emission factors.

- determines the appropriate Federal response to individual State rule,permit submissions and risk decisions by evaluating their impact on the attainment of air quality standards and compliance with technology based emission limitations. In the event of

State failure to develop adequate regulations or permit conditions, develops substitute Federal regulations.

- participates as principal technical negotiator and witness in State and Federal administrative rulemaking and permitting proceedings and in Federal litigation in which technical issues frequently border on the limits of known technology. The employee must cross-examine and be cross-examined by industry's expert consultants concerning the economic and technological feasibility of air pollution controls at administrative proceedings and in formal judicial proceedings in Federal Court.

- Coordinates with other multimedia programs and reviews and comments on reports, strategic plans etc. relating to the implementation of relevant sections of the Clean Air Act to achieve these objectives

- evaluates State and local air pollution regulatory development and permit and toxics programs, identifying factors which limit those programs' ability to meet the requirements of the Clean Air Act. Provides programmatic and technical advice to resolve identified problems; e.g., need for new or revised State regulations or for changes in the States's regulation or permit development process itself, areas of staff training needs, or improvements in monitoring networks. Serves as the regional focal point for regulation development and permit program related grant negotiations with assigned State(s) and local agencies and determines the amount and nature of financial incentives to help improve those agencies' regulatory development or permitting programs.

- maintains a high level of scientific or engineering knowledge in several areas of pollution control technology (e.g., electrostatic precipitation, fabric filtration, and absorption techniques as well as fluid flow and ventilation system design and techniques); researches technical literature and reports to stay familiar with industries located in assigned States and to keep abreast of new air pollution control equipment, techniques, and processes; and provides other technical staff with advice in the areas of specialized knowledge.

- conducts modeling analysis to support program initiatives, and, where needed, arranges for and serves as the technical manager of contracts designed to develop and define the Agency's knowledge of available control technology and ambient air quality modeling techniques for both criteria pollutants and air toxicants where little or no previous data exists.

- responds to inquiries from State officials, citizens, and industrial representatives concerning the interpretation and

application of policy directives and regulations related to air regulation and major source permit development. Responds to Congressional and media inquiries and requests from Agency headquarters concerning the status of the air regulatory development programs in assigned State(s) or relative to specific major rules and permits.

- Determines need for, organizes, and/or chairs working groups made up of internal and/or external representatives for the purpose of coordinating work efforts regarding policy and program development and strategic planning. Serves as a member on other working groups as required.

FACTOR 1, Knowledge Required by the Position - Level 1-8-1550 points

- Mastery of Environmental Science/Environmental Engineer concepts principles and practices to serve as a scientific or engineering authority on all aspects of air regulation and permit development in one or more assigned States. Specifically, the incumbent must have the professional technical, legal and program expertise to (1) understand a very broad range of industrial processes and the impact of their emissions on ambient air quality, (2) evaluate the adequacy of complex regulations and permit conditions on a wide range of toxic and/or criteria pollutants from those processes, (3) propose cost effective control programs to bring large geographic areas into attainment and (4) defend all technical judgments in adversarial proceedings.

- A comprehensive, intensive knowledge and skill to understand the processes involved in the operation of large industrial plants and the impact of those emissions combined with the emissions from mobile and area sources on a given area's ability to meet clean air standards or action levels, to develop regulations or permit conditions for major sources of multiple pollutants based on either control technology or ambient air quality determinants, and to pursue difficult rulemaking or permitting proceedings to successful conclusion.

- Mastery of advanced concepts, principles, and practices of environmental control technology to serve as a technical authority on pollutant emissions and control technologies relating to stack and fugitive emissions and their air quality impacts.

- Comprehensive knowledge and ability to apply the latest developments in environmental control technology to resolve complex emission control problems for which accepted methods may not be applicable and to review plans, designs and timetables for achieving ambient air quality standards, and to litigate technical differences when agreement cannot be reached.

- Mastery and skill of ARD programs and activities to advise State and local officials on improving the capabilities of their regulatory development and permitting programs with regard to the structure of regulations, classes of pollutants, entire industry categories, and program procedures. A detailed knowledge of EPA's grant program is also needed in order to utilize Federal funding incentives to encourage State and local agency adoption of recommended improvements. This area of responsibility requires excellent communication skills and the ability to achieve goals by working through others.

FACTOR 2, Supervisory Controls - Level 2-5-650 Points

Assignments are made by the supervisor in terms of broad, general objectives and take the form of responsibility for a specific State or States together with operational requirements. Determination of work to be done, objectives, and policies are established by the employee. The employee independently plans own work, coordinates with other staff or subject matter specialists, resolves technical and programmatic problems, and carries assignments through to completion. Estimated timeframes for assignment completion are determined by the incumbent and discussed with the supervisor. No technical or programmatic assistance is provided by the supervisor in the analysis of problems and issues nor in the development of assignment workplans. In general, the advice provided by Division management is limited to the administrative aspects of task resolution such as the availability of staff or contract resources to assist the incumbent. Because the incumbent is permitted broad latitude in fashioning solutions to complex problems, the completed work is reviewed by the supervisor solely from the standpoint of its adequacy in fulfilling the original assigned objectives and for general compliance with EPA policy and guidelines. The employee keeps the supervisor advised of major or controversial issues. Advice to State and local officials is accepted as sound and reviewed only for conformance with broad Agency policy and program objectives and budgetary considerations. Results of the work are considered technically authoritative.

FACTOR 3, Guidelines- Level 3-4-450 Points

Guidelines used include Agency policy, Federal, State, and local air pollution regulations, court decisions, control technology literature, and precedents and practices in the field of air pollution control. The employee uses initiative and judgement in selecting and applying relevant guidelines and precedents. In addition, employee utilizes innovation and resourcefulness in determining when and how to deviate from or extend established methodologies in situations where guidelines are not applicable due to the varied characteristics of complex industrial sources and the different application of emission limitations due to

geographic or age of facility considerations. The employee also uses considerable judgement in advising State and local officials concerning the applicability of EPA policy and regulations and their need to deviate from standard practice. The incumbent also independently identifies issues needing new agency interpretive guidance, develops own proposals for such new guidance, and works with appropriate Regional and Headquarters staff to influence the outcome of the policy development process.

FACTOR 4, Complexity Level - 4-5-325 Points

Assignments involve a broad range of scientific or engineering, regulatory, and permit program issues relating to multiple pollutants, new and existing sources, attainment and non-attainment areas, and impacts which directly threaten human health and the environment. These assignments require the ability to resolve novel problems encountered in developing and implementing EPA, State, and local regulations. As a senior environmental engineer/scientist, the employee provides State and local officials, industry, Region V legal and monitoring staff and management with authoritative advice and direction on regulation development, permit condition development, ambient monitor network design, performance and cost of alternative pollution control technologies, and the proper interpretation of complex agency regulations, policies, and guidelines. EPA has currently established ambient air quality standards for particulate matter, sulfur dioxide, ozone (requiring control of volatile organic compounds), lead, carbon monoxide and nitrogen dioxide. Emission limits for these compounds vary according to the geographic location of the source (e.g., attainment vs. non-attainment area), the source's size, and whether it is a new or existing facility as well as other factors.

Statutory technology based determinations can cause the application of reasonably available control technology (RACT), best available control technology (BACT), or lowest achievable emission rate (LAER). In addition, seven hazardous air pollutants have been regulated (asbestos, mercury, beryllium, vinyl chloride, benzene, arsenic, and radionuclides). Thus, there are a virtual infinite series of combinations and permutations of control requirements to which regulations or permit conditions may need to be developed for a large complex source of multiple air contaminants. As can be seen, the incumbent must be familiar with a broad range of industries and operations as well as the impacts of mobile sources and area sources. An extremely wide range of air contaminants are emitted by these industries and each industrial process has very specific regulatory requirements which can only be ascertained by a detailed review of a complex regulatory scheme. The incumbent must understand not only the overall regulatory structure of the Clean Air Act and the individual State involved but must also be intimately aware of how the unique properties of each regulated

pollutant (particle size, vapor pressure, viscosity, etc.) relate to process parameters under both current and proposed alternative regulatory conditions.

The assessment of the cost effectiveness of control options is a very complex area of the incumbent's responsibility. The incumbent evaluates the cost proposals of industry and in the absence of such values, develops estimates for Agency use in such areas as the review of State implementation plans or in the development of Federal implementation plans. This requires proficiency in environmental control cost calculations, detailed understanding of achievable emission control system efficiencies (given individual or industry-wide plant configurations and constraints), and up-to-date knowledge of available control technologies.

Finally, in taking action to improve State and local agency regulatory and permit efforts, the incumbent must utilize EPA's grant and audit procedures which requires dealing with the complex interaction of program and fiscal concerns. The incumbent must determine the proper mix of financial incentives such as the Region's grant allocation workload model or disincentives; e.g., the direct conditioning of a grant under the Agency's "High Risk" grant policy. These actions may affect hundreds of thousands of dollars in annual grant fund allocations.

FACTOR 5, Scope and Effect - Level 5-5-325 Points

The purpose of the position is to provide a senior regulation development engineer/scientist to deal with the most complex reviews of State rules or permits or the development of Federal rules in one or more States and to provide sound technical and program advice to the assigned States' regulatory and permit programs. The work involves technical, legal, and programmatic issues that can lead to major litigation involving the Department of Justice and the Federal courts. Recommendations and policy interpretations made by the incumbent affect not only the major rulemaking or permit at hand which could impact the health of millions of people in a large geographic area or tens of thousands in the vicinity of a major industrial emitter, but also could set precedence for other cases affecting the entire nation. The major rules handled by the employee generally involve costs in excess of $1,000,000 and frequently are in the multi-million dollar range. Initiation of policy reviews and participation in the development of new Agency and Regional policies and the review of new regulations have wide ranging economic, employment, and health impacts. Improvements in State programs resulting from employee's consultation and active intervention obviously have beneficial effects on the entire State's air quality.

FACTOR 6, Personal Contacts - Level 6-3-60 Points

Personal contacts within the Air and Radiation Division include those with Regional experts, grants specialists, enforcement staff and regulatory development personnel. Within the Region the incumbent works closely with Environmental Science Division monitoring staff and with Office of Regional Counsel attorneys. The incumbent frequently deals with EPA contractors in a contract management role. At the EPA headquarters level there is frequent consultation with program and technical staff and with the Office of General Counsel legal staff. Contested rulemaking cases require close coordination of technical issues with Department of Justice legal staff in Washington, D.C. Contacts in the assigned State and local agencies include the Air Director, Regulatory Development and Permits Chiefs, and staff. Frequent contacts are also made with senior environmental and legal staff of large regulated industries. Contacts with the general public and the media to explain EPA policy and specific permit and rulemaking actions occur with regularity.

FACTOR 7, Purpose of Contacts - Level 7-3-120 Points

Contacts within EPA are generally aimed at the development of strong regulations and permits and involve legal, technical, and policy review of complex air emission and air quality problems. Contacts with the Department of Justice legal staff involve the development of the technical and economic justification of the government's litigation stance. Formal sworn testimony is given in pretrial depositions and during trials in the Federal Courts. Contacts with State and local air pollution control officials concern explaining EPA policy, providing program advice, or discussing Federal/State strategies for attaining air quality standards. The employee makes presentations before State environmental commissions and boards to explain USEPA regulatory policy. Discussions with industry are frequently adversarial and involve major differences in technical and economic judgment and concern the health and environmental impact of air contaminant emissions. Contacts with the general public and media representatives demand the ability to explain complex environmental issues in layman's terms that neither exaggerate nor understate health risks.

FACTOR 8, Physical Demands - Level 8-1-5 Points

The work requires the employee to occasionally engage in on-site visits to heavy industrial facilities or monitoring locations which involve climbing, walking, stooping, and bending.

FACTOR 9, Work Environment - Level 9-1-5 Points

During occasional field visits the employee may be exposed to unhealthy levels of air contaminants and other safety threats. The use of mandated safety equipment during these visits may subject the employee to moderate discomfort.

- Coordinates with other multimedia programs and reviews and comments on reports, strategic plans etc. relating to the implementation of relevant sections of the Clean Air Act to achieve these objectives

TOTAL POINTS - 3490

FACTOR EVALUATION SYSTEM EVALUATION STATEMENT

TITLE: INTERDISCIPLINARY :Environmental Engineer/Environmental Scientist	SERIES: 819/1301	GRADE: GS-13
Organization: AMD		POS.NO.: N37101A
CLASSIFIER: BMHERNANDEZ BMH		DATE: 9/7/03

EVALUATION FACTORS	POINTS ASSIGNED	STANDARD USED (BMK, FL #)	COMMENTS
1. KNOWLEDGE REQUIRED	1550	1-8	Mastery of the speciality areas in the engineering and/or science field; mastery of the concepts, principles and practices of environmental or general engineering, environmental and or physical sciences.
2. SUPV CONTROL	450	2-4	The incumbent works under minimal supervision. The incumbent and the supervisor develops projects, deadlines, and work to be accomplished. The incumbent plans and carries out assignments, resolves most conflicts keeping supervisor informed of progress and potentially controversial matters. Work is reviewed from an overall standpoint in terms of feasibility and effectiveness in meeting requirements.
3. GUIDELINES	650	3-5	Guidelines are basic legislation and broadly stated Agency regulations, directives and policy statements. The employee exercises considerable judgement and ingenuity in interpreting the intent of the guides that do exist and in developing applications.
4. COMPLEXITY	325	4-5	Decisions regarding what needs to be done include major areas of uncertainty in approach, methodology or evaluation methods owing to the unknown field conditions, conflicting requirements and technological developments.
5. SCOPE AND Effect	225	5-4	Work affects a wide range of agency activities. The includes the resolution of a broad range of critical or highly unusual engineering and/or scientific problems.

6.PERSONAL CONTACTS	60	6-3	Personal contacts are with scientists, engineers, and other subject matter specialists within the Region and Hqs, other federal and state agencies, industry representatives, the public and media.
7.PURPOSE OF CONTACTS	120	7-3	The purpose is to provide technical expertise that requires flexibility and skill in persuasion and negotiation.
8.PHYSICAL DEMANDS	20	8-2	The work within the office is sedentary; however the time spent on site inspections require some physical exertion as incumbent is required to carry equipment weighing up to 50 lbs and the use of personal protective equipment.
9.WORK ENV.	20	9-2	The work is primarily in an office setting but can involve field work at abandoned hazardous waste sites of moderate risks or discomforts that require special safety precautions.
TOTAL POINTS	3420		
GRADE CONVERSION	GS-13		

REMARKS: Standards referenced are the OPM PC Standard for General Physical Science Series, GS-1301; OPM PC Standard for Environmental Engineering Series, GS-819 TS-30;the OPM PC Standard for General Biological Science Series, GS-401 8/89; and the OPM PC primary standard.

EPA FORM 3150-21 (12/77)